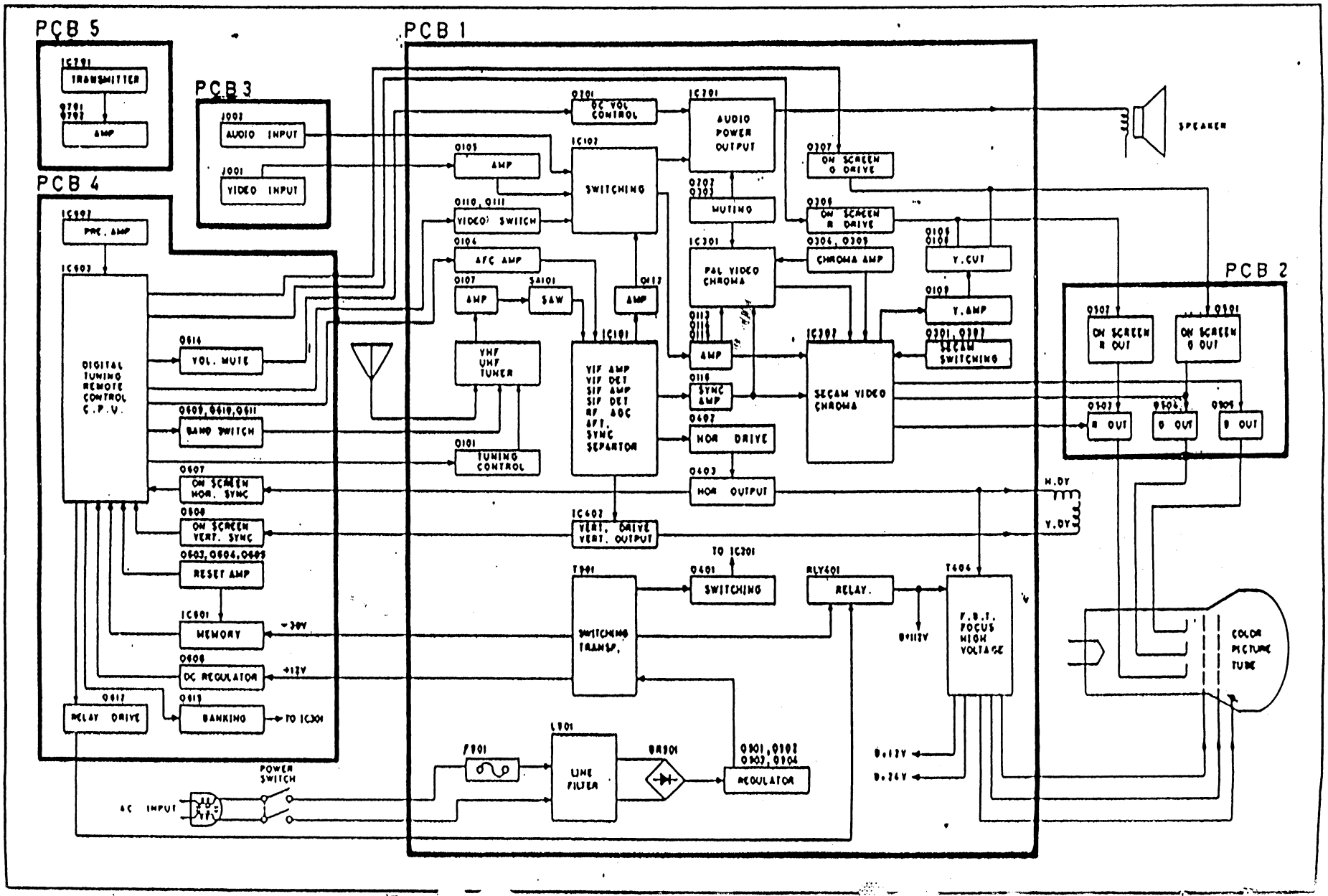
Rudolf Hemmersbach
Otterweg 7
8500 Nürnberg 10
Telefon 0911/5 27 98 40
Telefax 0911/5 27 98 74

# SERVICE MANUAL

RFT 36M

Wir bedauern, daß die
Qualität der Vorlage
keine bessere Kopie
zuließ

# BLOCK DIAGRAM



| VOLTAGE TABLE FOR TRANSISTOR | | | | | | | |
|---|---|---|---|---|---|---|---|
| SYMBOL | B (V) | C (V) | E (V) | SYMBOL | B (V) | C (V) | E (V) |
| Q101 | 0.2 | 12.3 | GND | Q403 | -0.2 | 116 | GND |
| Q104 | 0.1 | 3.5 | GND | Q501 | 2 | 138 | 1.8 |
| Q105 | 0.8 | 2.9 | 0.1 | Q502 | 2 | 141 | 1.9 |
| Q106 | 0 | 12.8 | 0 | Q503 | 2.7 | 141 | 2.3 |
| Q107 | 5.9 | 11.5 | 5.1 | Q504 | 3 | 138 | 2.7 |
| Q108 | 0.6 | 0 | 0 | Q505 | 2.9 | 146 | 2.5 |
| Q109 | 0 | 0.6 | 0 | Q601 | 10.03 | 0.1 | 0.02 |
| Q110 | 0.6 | 0 | GND | Q602 | 0 | 4.5 | 0 |
| Q111 | 0 | 9.9 | GND | Q603 | 4.7 | 0.04 | 4.7 |
| Q112 | 2.9 | 12.8 | 2.3 | Q604 | 0.05 | 4.7 | 0.03 |
| Q113 | 3.3 | 7.7 | 2.7 | Q605 | 0.08 | 0.04 | 0.04 |
| Q114 | 7.7 | 12.8 | 7 | Q606 | -0.06 | 4.3 | 0.36 |
| Q115 | 2.7 | 12.8 | 2.11 | Q607 | -0.09 | 4.2 | 0.03 |
| Q116 | 0.2 | 11 | 0 | Q608 | -0.06 | 4.3 | 0.03 |
| Q201 | 3.1 | 11.6 | 4.6 | Q609 | 12.5 | 0 | 12.5 |
| Q202 | 0 | 7.9 | 0 | Q610 | 12.5 | 0 | 12.5 |
| Q301 | 0.5 | 0 | GND | Q611 | 11.8 | 12.4 | 0 |
| Q302 | 0 | 7.8 | GND | Q612 | 0.7 | 0.1 | 0.2 |
| Q303 | 0 | 8.6 | 0.1 | Q613 | 0.09 | 0.14 | 0.08 |
| Q304 | 10.9 | 0 | 11.5 | Q614 | 0.15 | 3.2 | 0.3 |
| Q305 | 8.2 | 0 | 8.9 | Q615 | 0.09 | 8.8 | 0.03 |
| Q306 | 0 | 3 | 0 | Q901 | 8.7 | 12.1 | 8 |
| Q307 | 0 | 3 | GND | Q902 | 5.3 | 0 | 1.9 |
| Q401 | 12.7 | 12.8 | 12.1 | Q903 | 0 | 1.1 | 0 |
| Q402 | 0.4 | 76.7 | 0 | Q904 | -2.4 | 261 | 0 |

NOTE : Voltage are taken under tuned condition with

CONTRAST : Maximum Position
BRIGHTNESS : Center Position
COLOR : Center Position
SIGNAL INPUT : 80 dBuV
CHANNEL SETTING : The Last Channel of VHF High

VOLTAGE TABLE FOR IC

| SYMBOL / PIN NO. | IC 101 (V) | IC 102 (V) | IC 201 (V) | IC 301 (V) | IC 302 (V) |
|---|---|---|---|---|---|
| 1 | 4.82 | 0 | 0 | 11.20 | 11.20 |
| 2 | 5.32 | 2.82 | 4.63 | 11.00 | 9.48 |
| 3 | 4.36 | 2.82 | 0 | 8.54 | 2.86 |
| 4 | 4.59 | 3.97 | 0.35 | 8.54 | 2.80 |
| 5 | 3.45 | 0.01 | 7.07 | 2.27 | 2.90 |
| 6 | 6.81 | 0.01 | 7.18 | 1.60 | 1.50 |
| 7 | 3.10 | GND | GND | 6.17 | 1.10 |
| 8 | 3.10 | 1.04 | 7.24 | 5.38 | 1.52 |
| 9 | 4.80 | 1.55 | 15.20 | 8.80 | 9.08 |
| 10 | 4.80 | 1.55 | | 1.91 | 2.28 |
| 11 | 2.44 | 1.35 | | 1.20 | 2.28 |
| 12 | 7.52 | 9.72 | | 8.73 | 2.27 |
| 13 | 3.65 | 9.72 | | 5.68 | 2.27 |
| 14 | 6.59 | 12.40 | | GND | GND |
| 15 | 6.59 | | | 7.30 | 2.27 |
| 16 | 9.51 | | | 4.20 | 2.28 |
| 17 | 2.07 | | | 8.45 | 10.40 |
| 18 | 5.34 | | | 8.45 | -0.10 |
| 19 | 5.33 | | | 0 | 6.17 |
| 20 | 9.68 | | | 9.14 | 0.01 |
| 21 | GND | | | 3.05 | 9.02 |
| 22 | 3.20 | | | 3.07 | 6.43 |
| 23 | 0.83 | | | -0.10 | 2.28 |
| 24 | 4.65 | | | 2.69 | 2.28 |
| 25 | 0.60 | | | 2.69 | 5.94 |
| 26 | 4.04 | | | 3.72 | -0 |
| 27 | 0.18 | | | 3.71 | 11.20 |
| 28 | 4.82 | | | 9.48 | 0.36 |

NOTE : VOLTAGE ARE TAKEN UNDER TUNED CONDITION WITH

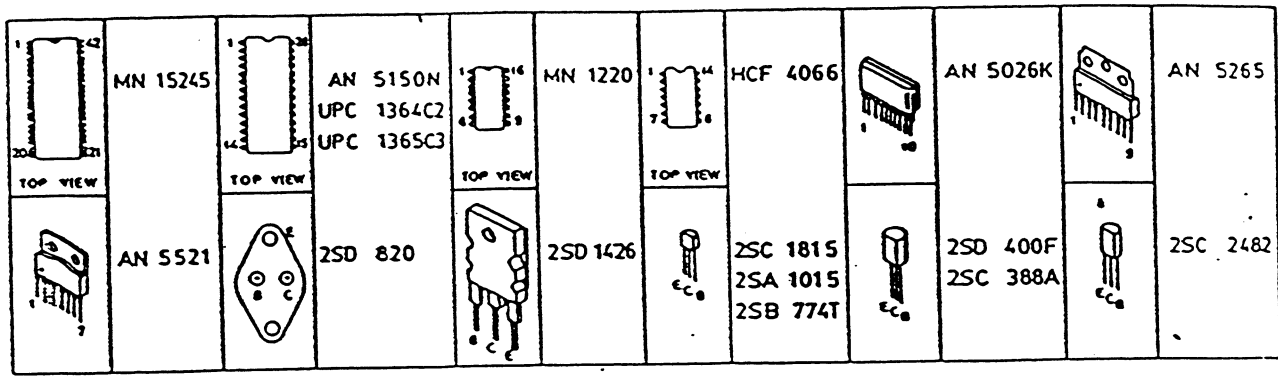
CONTRAST : MAXIMUM POSITION
BRIGHTNESS : CENTER POSITION
COLOR : CENTER POSITION
SIGNAL INPUT : 80 dBuV
CHANNEL SETTING : THE LAST CHANNEL OF VHF HIGH

| VOLTAGE TABLE FOR IC | | | | |
|---|---|---|---|---|
| SYMBOL / PIN NO. | IC 402 (V) | IC 601 (V) | IC 602 (V) | IC 603 (V) |
| 1 | GND | 0.05 | 2.12 | GND |
| 2 | 12.00 | GND | 4.68 | 2.32 |
| 3 | 26.40 | 0.05 | 0.06 | 4.08 |
| 4 | 0.73 | 0 | NC | 4.46 |
| 5 | 0.35 | 0.01 | GND | 4.62 |
| 6 | 1.04 | 0.01 | GND | 4.59 |
| 7 | 26.00 | 4.70 | 2.14 | 3.78 |
| 8 | | -31.70 | 2.15 | 4.69 |
| 9 | | -7.26 | 5.25 | 4.51 |
| 10 | | 0 | 1.35 | 4.61 |
| 11 | | -0 | | 4.61 |
| 12 | | -0 | | 4.61 |
| 13 | | -0 | | 4.61 |
| 14 | | 0.05 | | 4.59 |
| 15 | | 0.05 | | 4.57 |
| 16 | | | | 4.59 |
| 17 | | | | 0.14 |
| 18 | | | | 0.05 |
| 19 | | | | 0.05 |
| 20 | | | | 0.05 |
| 21 | | | | 0.05 |
| 22 | | | | 0.05 |
| 23 | | | | 0.03 |
| 24 | | | | 0 |
| 25 | | | | 0 |
| 26 | | | | 0 |
| 27 | | | | NC |
| 28 | | | | NC |
| 29 | | | | NC |
| 30 | | | | 0.14 |
| 31 | | | | NC |
| 32 | | | | NC |
| 33 | | | | NC |
| 34 | | | | 0.75 |
| 35 | | | | 2.65 |
| 36 | | | | 1.43 |
| 37 | | | | 12.00 |
| 38 | | | | 0.15 |
| 39 | | | | 12.00 |
| 40 | | | | 2.23 |
| 41 | | | | 2.23 |
| 42 | | | | 4.64 |

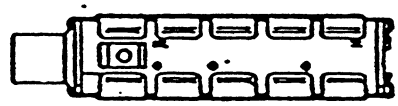
NOTE : Voltage are taken under tuned condition with

CONTRAST : Maximum Position
BRIGHTNESS : Center Position
COLOR : Center Position
SIGNAL INPUT : 80 dBuV
CHANNEL SETTING : The Last Channel of VHF High

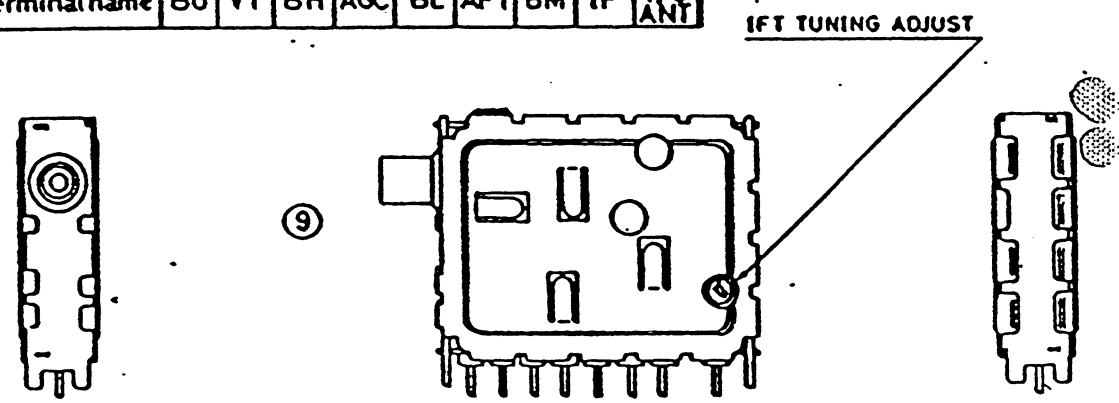
## TRANSISTOR AND IC IDENTIFY :




## PICTORIAL VIEW OF TUNER :

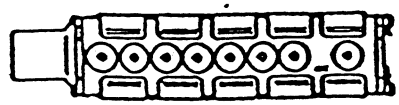


| Terminal NO. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Terminal name | BU | VT | BH | AGC | BL | AFT | BM | IF | V/U ANT |

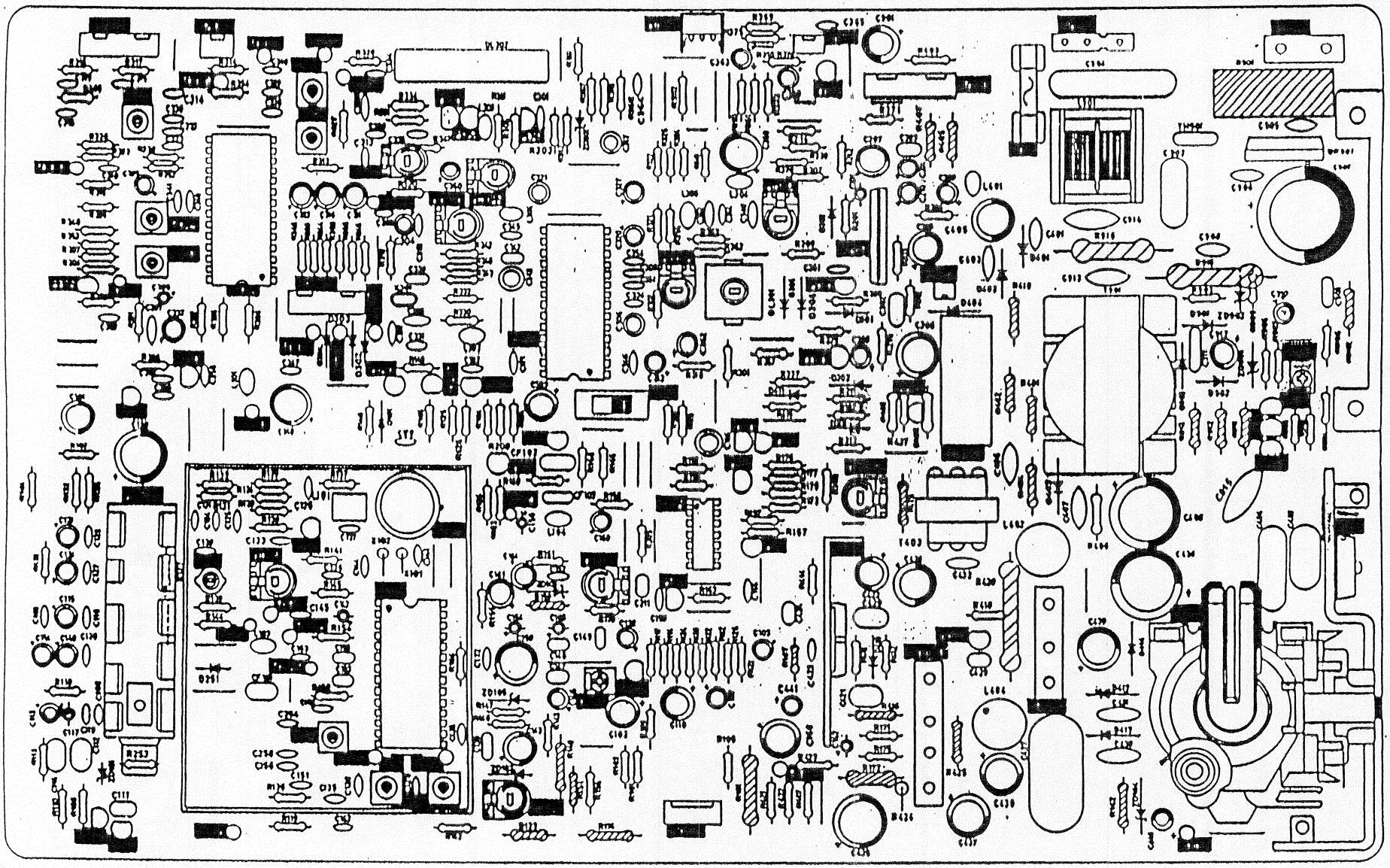



| SUPPLY VOLTAGE (V) | | | | |
|---|---|---|---|---|
| Term. | ch. | VHF LO | VHF HI | UHF |
| 7 | BM | 12 | 12 | 12 |
| 5 | BL | 12 | Open | 12 |
| 3 | BH | Open | 12 | Open |
| 1 | BU | Open | Open | 12 |

①②③④⑤⑥⑦ ⑧



COMPONENT DIAGRAM OF MAIN BOARD (TOP VIEW)

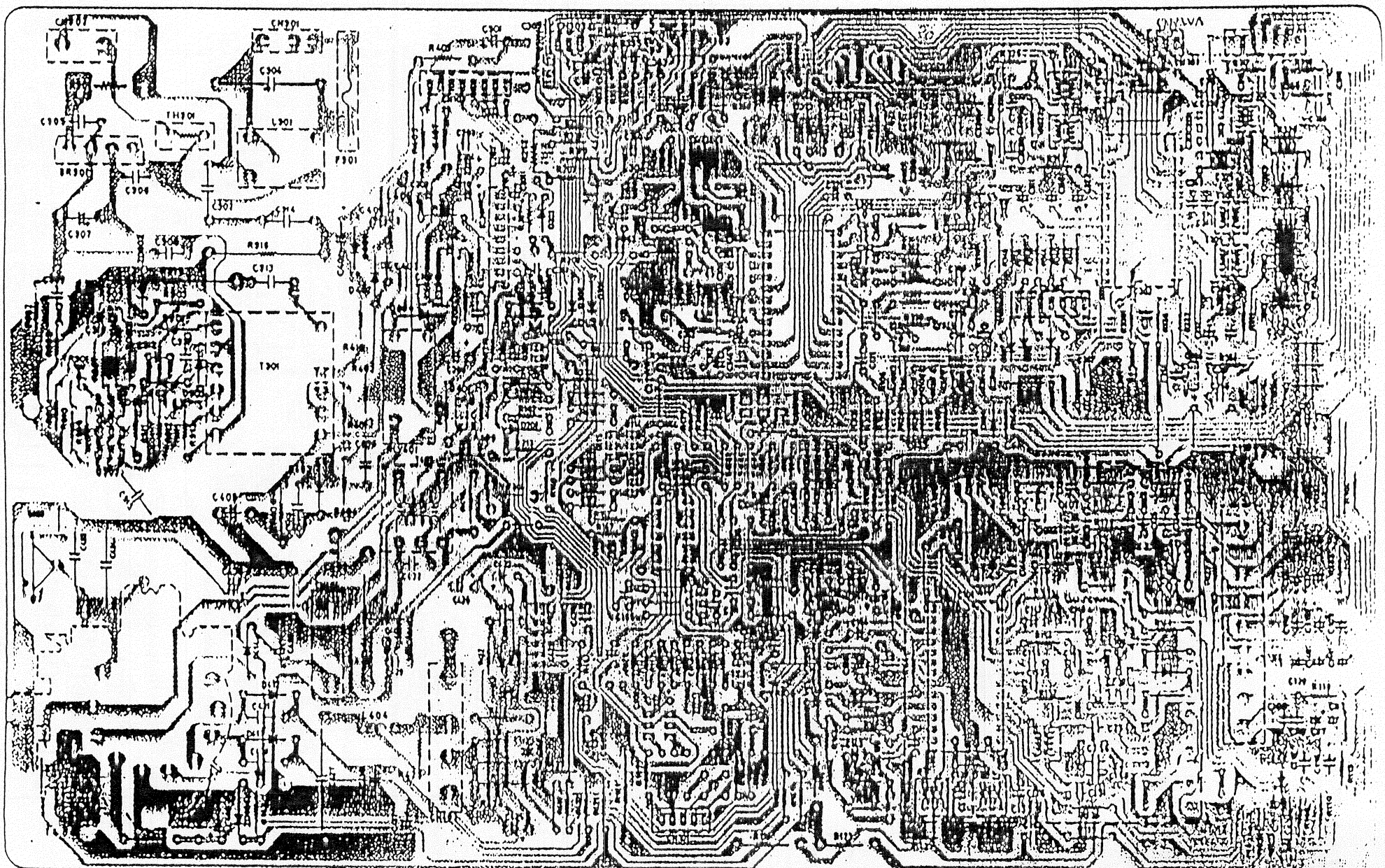


* REMARK : BLACK BACKGROUND WHITE LETTERING FOR ALIGNMENT POINT USE.*



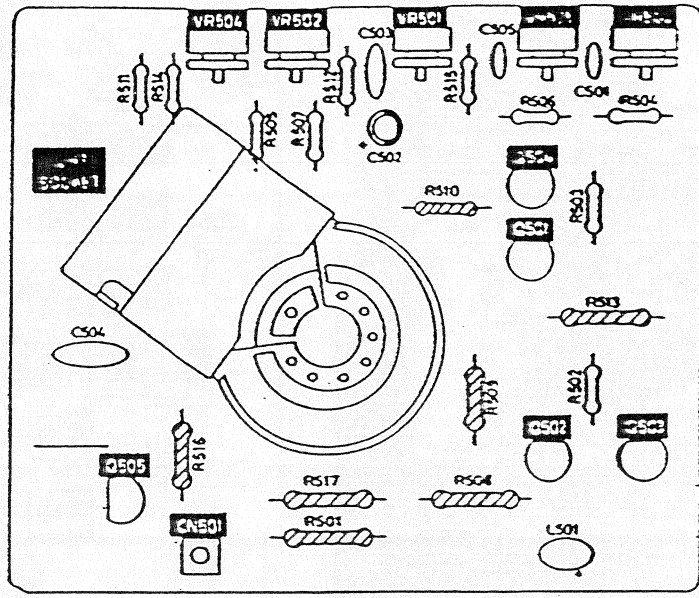
K-3915 WF

COMPONENT DIAGRAM OF MAIN BOARD (BOTTOM VIEW)

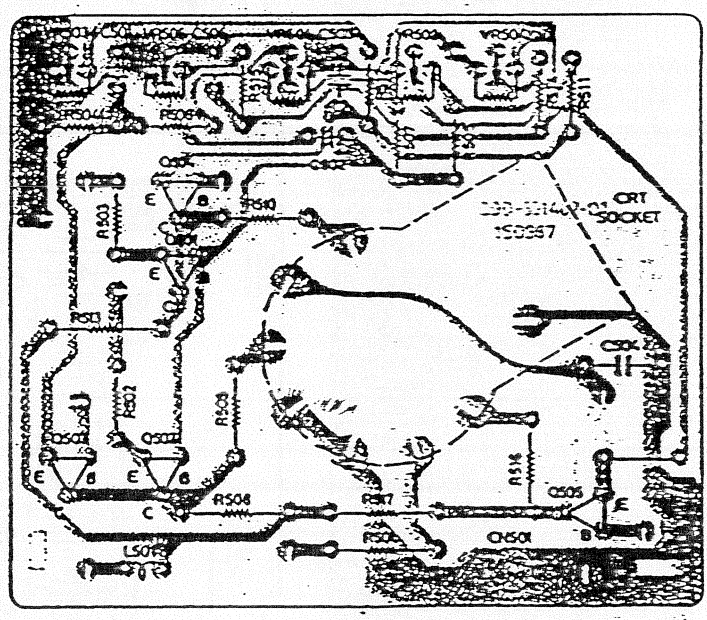


## COMPONENT DIAGRAM FOR CRT BOARD

(TOP VIEW)

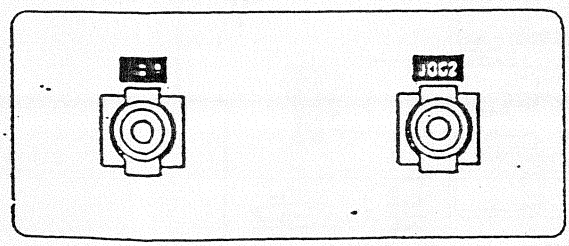



(BOTTOM VIEW)

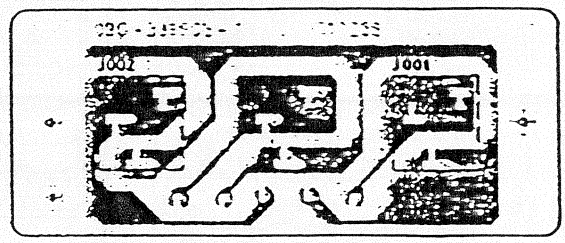



## JACK BOARD

(TOP VIEW)




(BOTTOM VIEW)



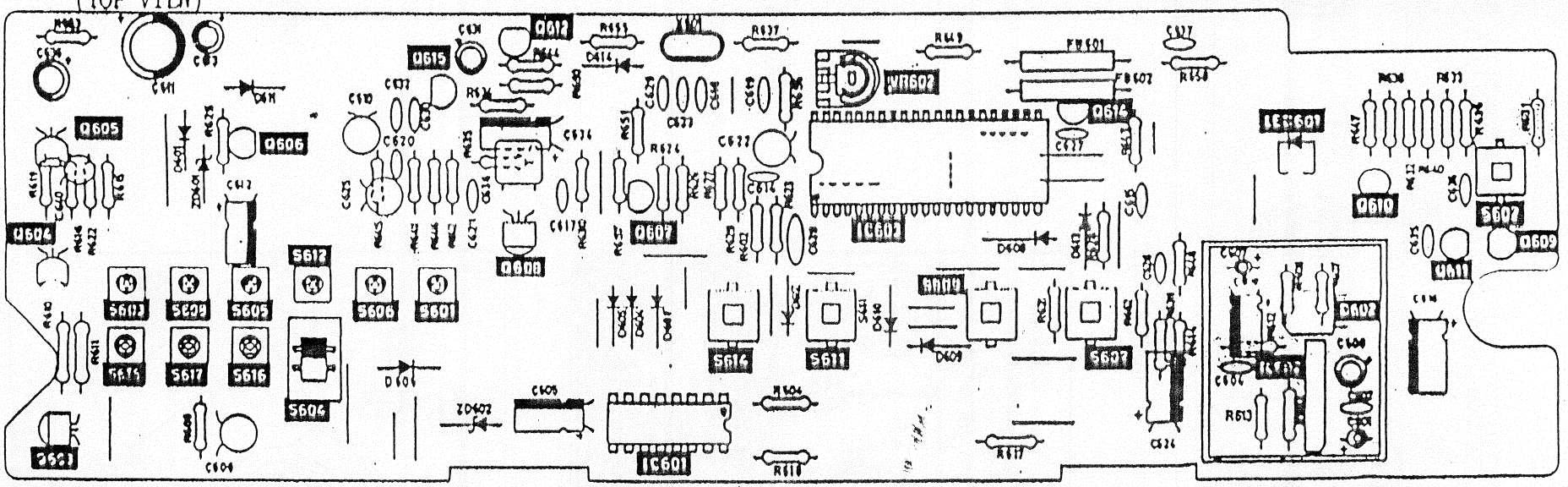

* BLACK BACKGROUND WHITE LETTERING FOR ALIGNMENT POINT USE. *



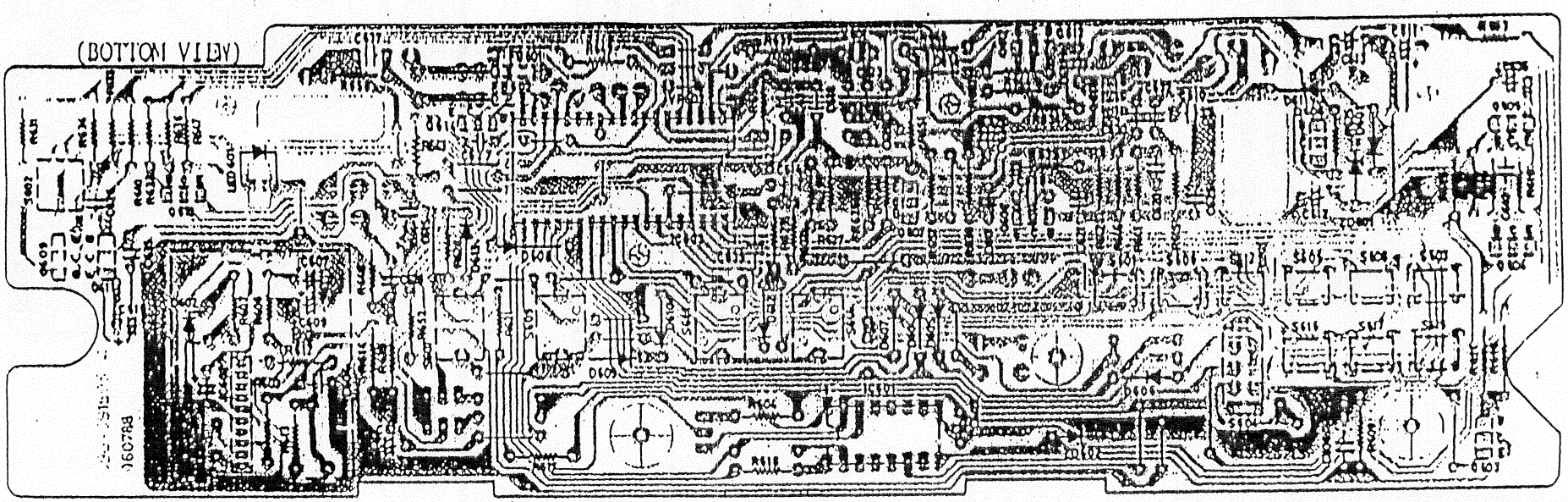
K-3915WFIR.

# COMPONENT DIAGRAM OF CHANNEL BOARD

(TOP VIEW)



(BOTTOM VIEW)

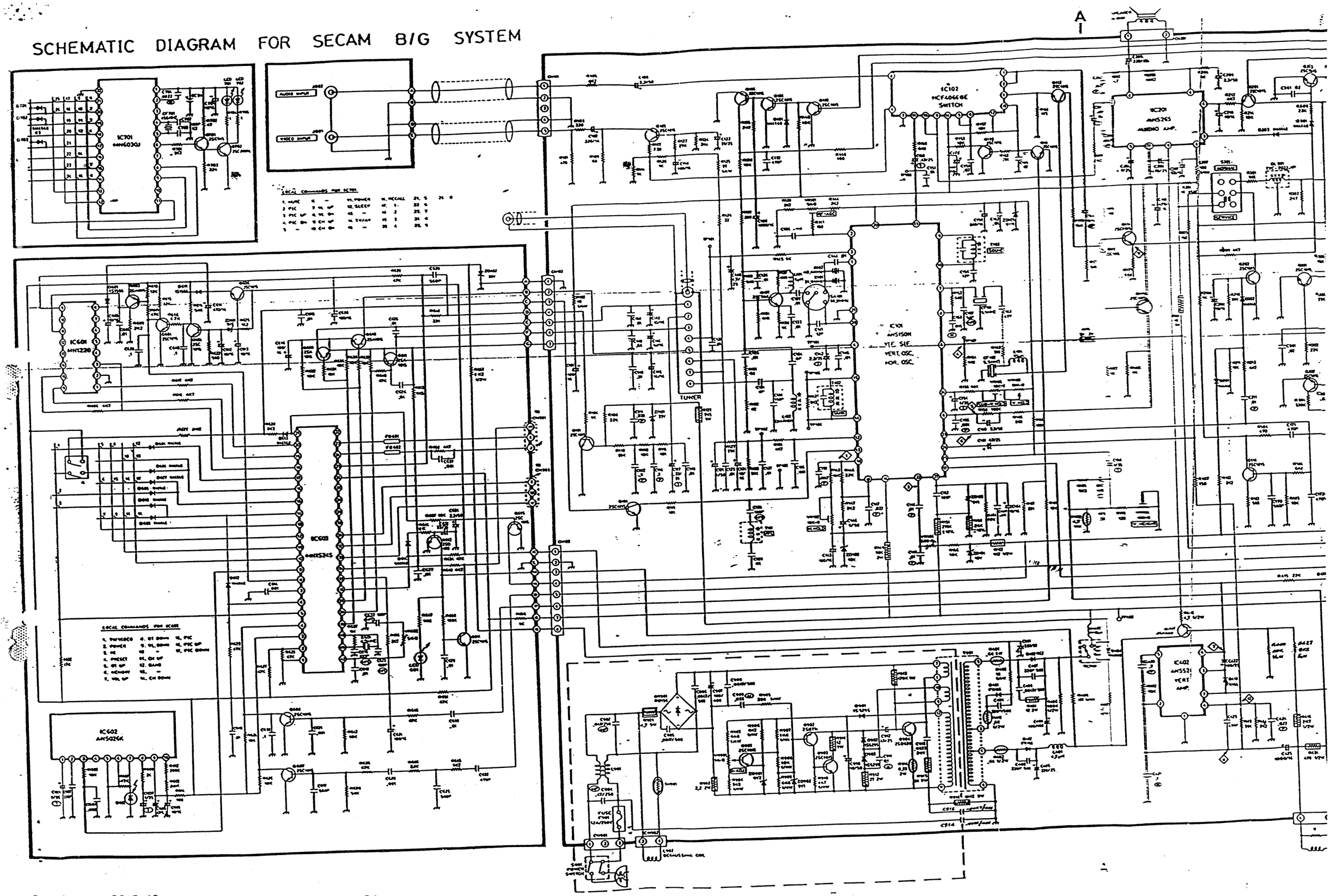


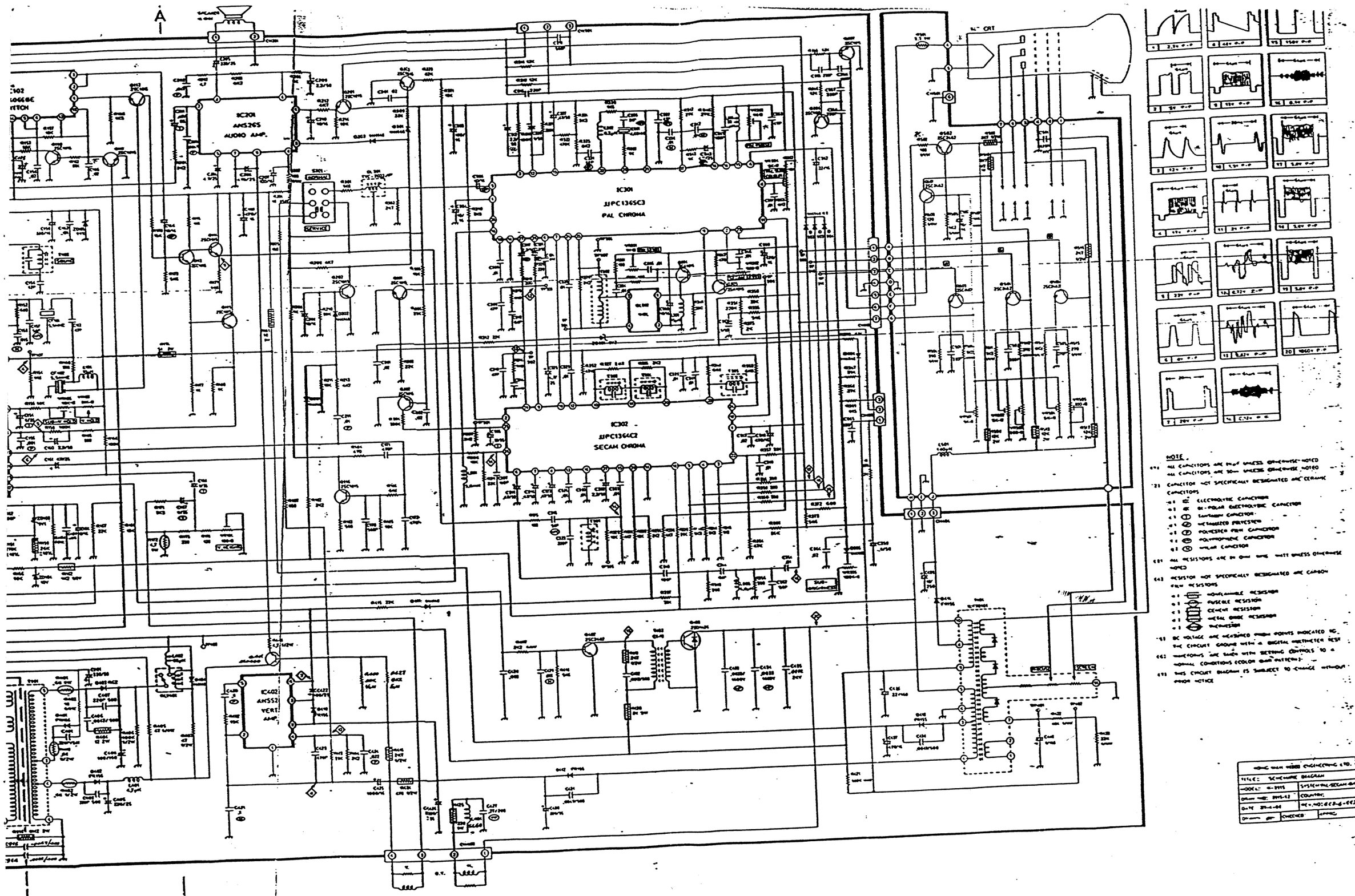
* REMARK : BLACK BACKGROUND WHITE LETTERING FOR ALIGNMENT POINT USE. *



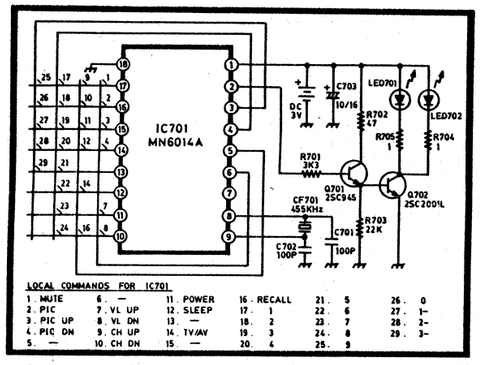
L-3915W

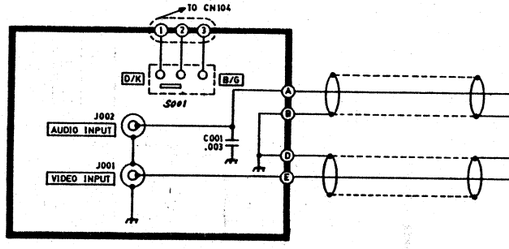
# SCHEMATIC DIAGRAM FOR SECAM BIG SYSTEM

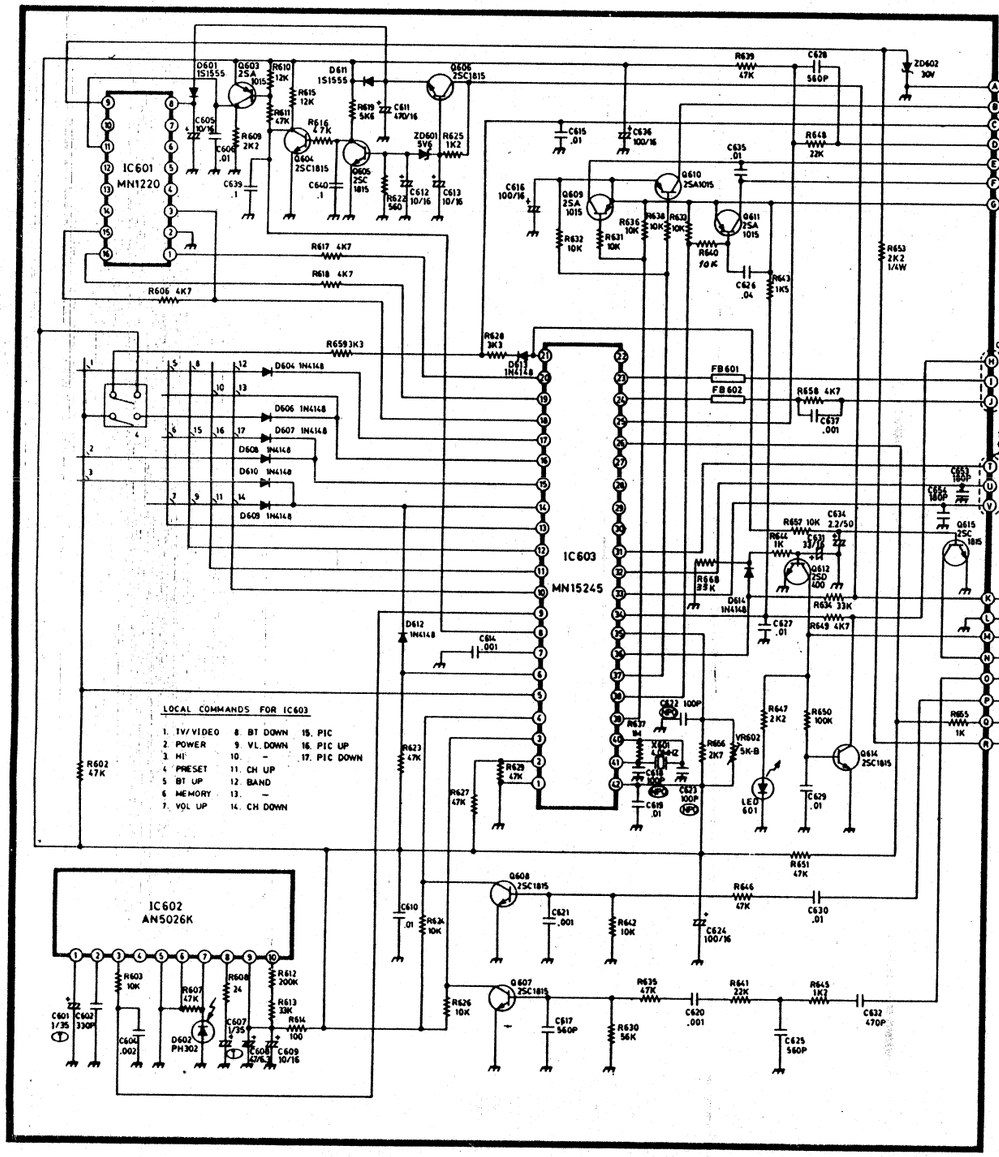


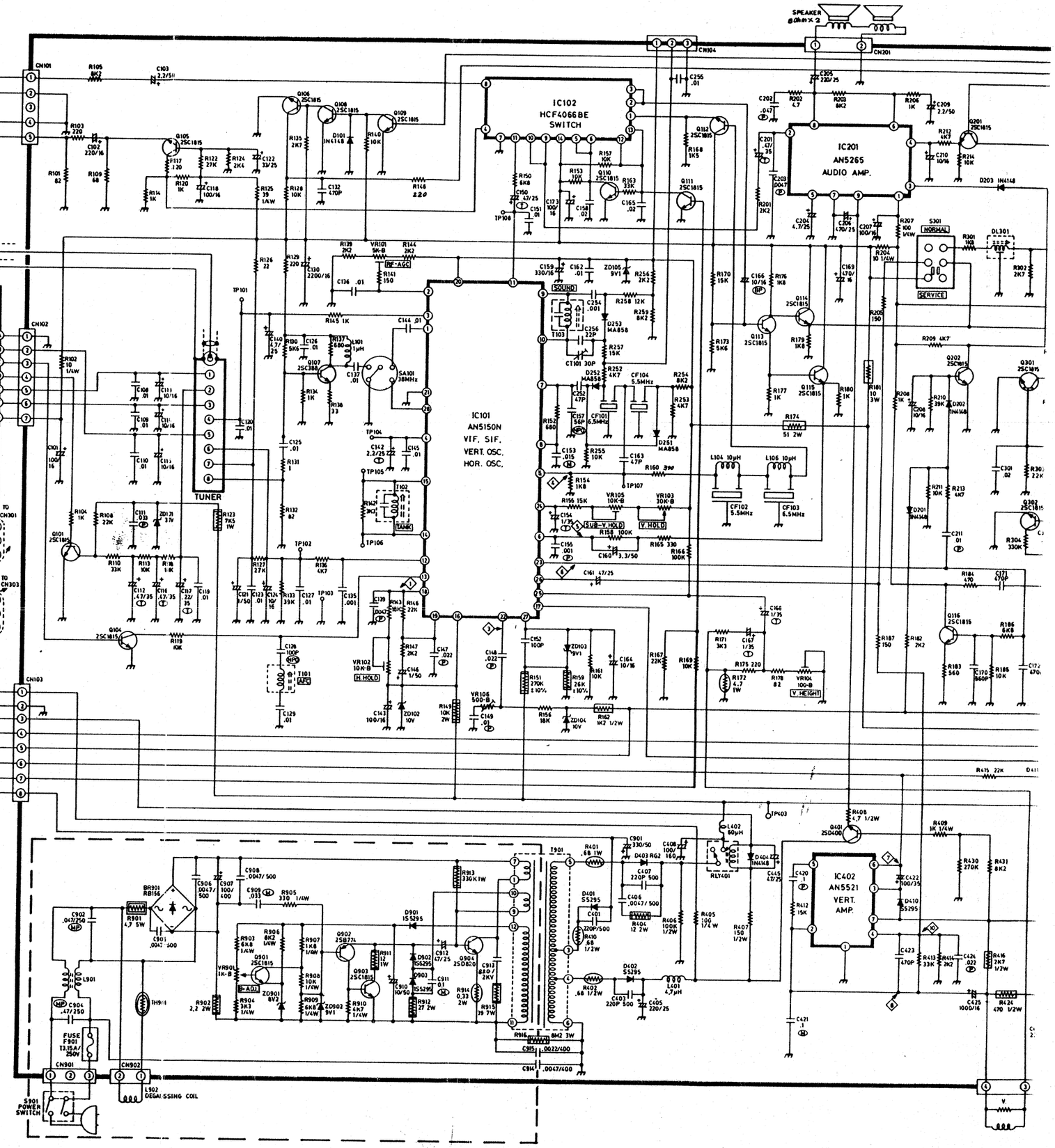

A
IC301
AN5265
AUDIO AMP.
IC301
μPC1365C3
PAL CHROMA
IC302
μPC1364C2
SECAM CHROMA
IC401
AN5521
VERT.
DEF.
14" CRT
NOTE :
ALL CAPACITORS ARE IN μF UNLESS OTHERWISE NOTED
ALL CAPACITORS ARE 50V UNLESS OTHERWISE NOTED
CAPACITOR NOT SPECIFICALLY DESIGNATED ARE CERAMIC CAPACITORS
ELECTROLYTIC CAPACITOR
BI-POLAR ELECTROLYTIC CAPACITOR
TANTALUM CAPACITOR
METALLIZED POLYESTER
POLYESTER FILM CAPACITOR
POLYPROPYLENE CAPACITOR
MYLAR CAPACITOR
ALL RESISTORS ARE IN OHMS 1/4W 5% UNLESS OTHERWISE NOTED
RESISTOR NOT SPECIFICALLY DESIGNATED ARE CARBON FILM RESISTORS
NONFLAMMABLE RESISTOR
FUSIBLE RESISTOR
CEMENT RESISTOR
METAL OXIDE RESISTOR
THERMISTOR
DC VOLTAGE ARE MEASURED WHEN POINTS INDICATED TO THE CIRCUIT GROUND WITH A DIGITAL MULTIMETER (RES
MEASUREMENTS ARE MADE WITH SETTING CONTROLS TO A NORMAL CONDITIONS ECOLOR BAR PATTERN).
THIS CIRCUIT DIAGRAM IS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE
TITLE : SCHEMATIC DIAGRAM
CHECKED

# SCHEMATIC DIAGRAM FOR PAL-B/G-D/K SYSTEM




Drawing no : 3921-20

IC102
HCF4066BE
SWITCH

IC101
AN5150N
VIF, SIF,
VERT. OSC,
HOR. OSC,

IC201
AN5265
AUDIO AMP.

IC301
UPC1365C3
PAL CHROMA

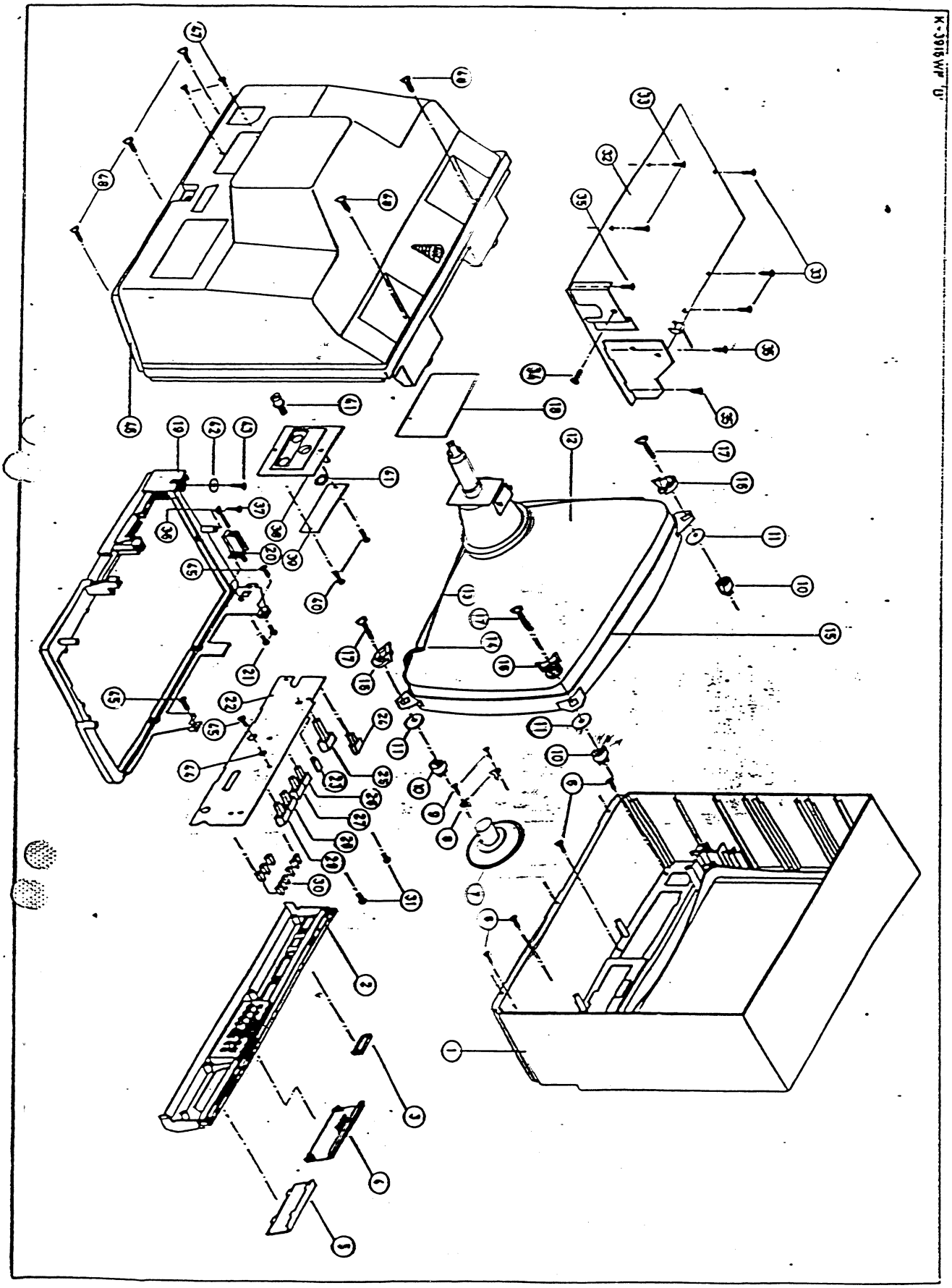
IC302
UPC1364C2
SECAM CHROMA

IC402
AN5521
VERT.
AMP.

SPEAKER
8ohm X 2

20" CRT

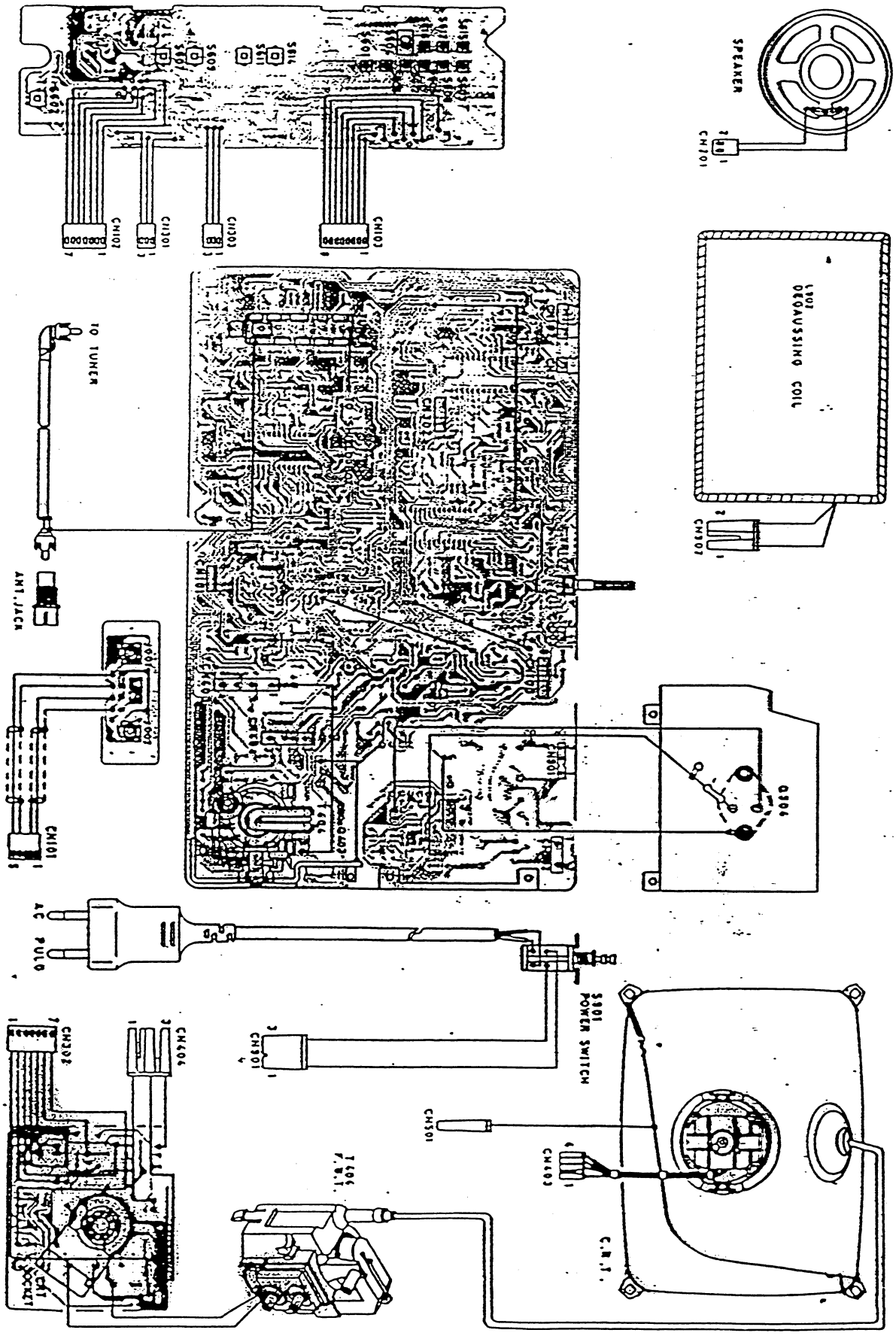
## EXPLODED VIEW DIAGRAM






K-3915WF (B)

WIRING DIAGRAM






K-3915WF(B)